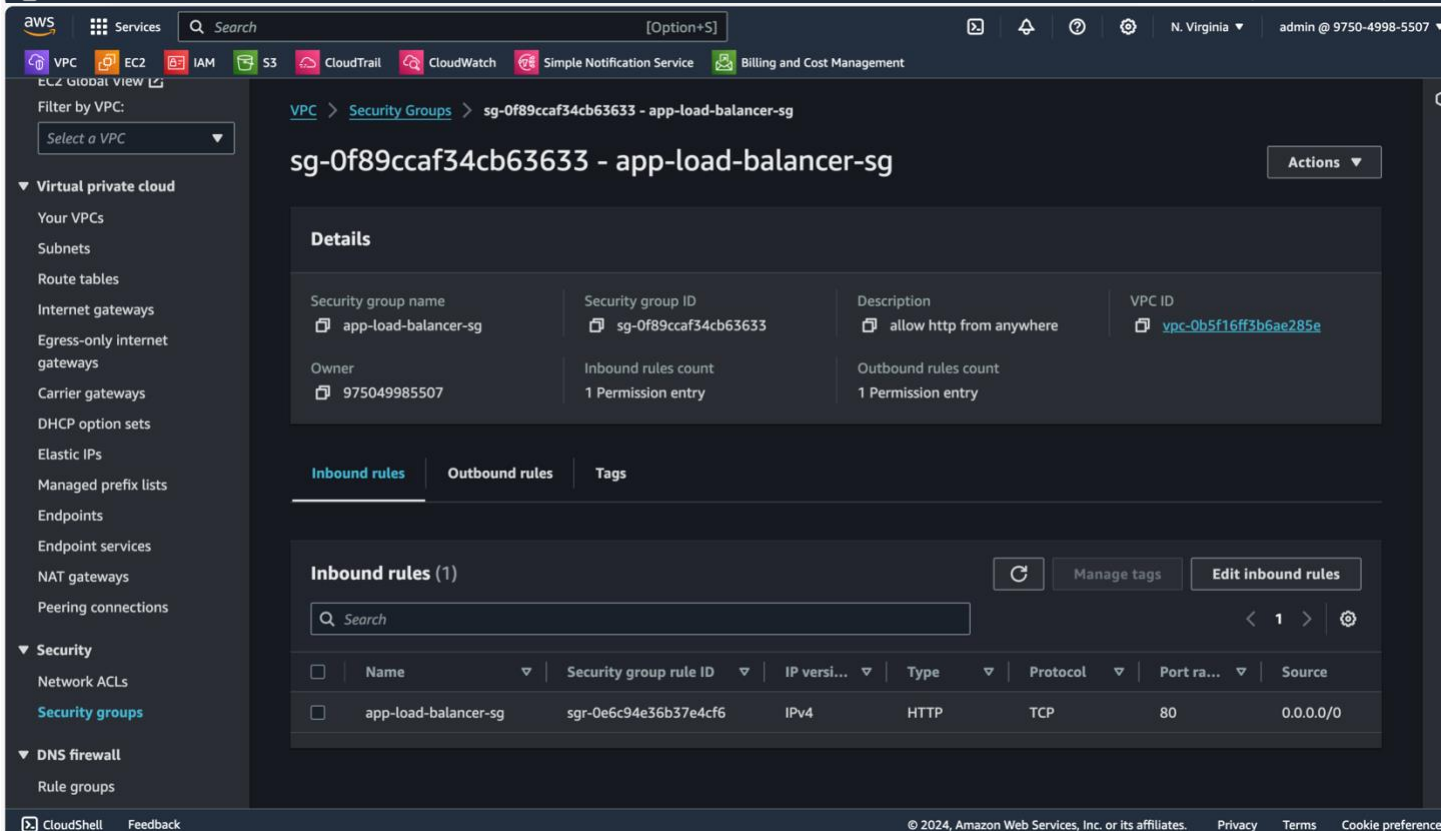
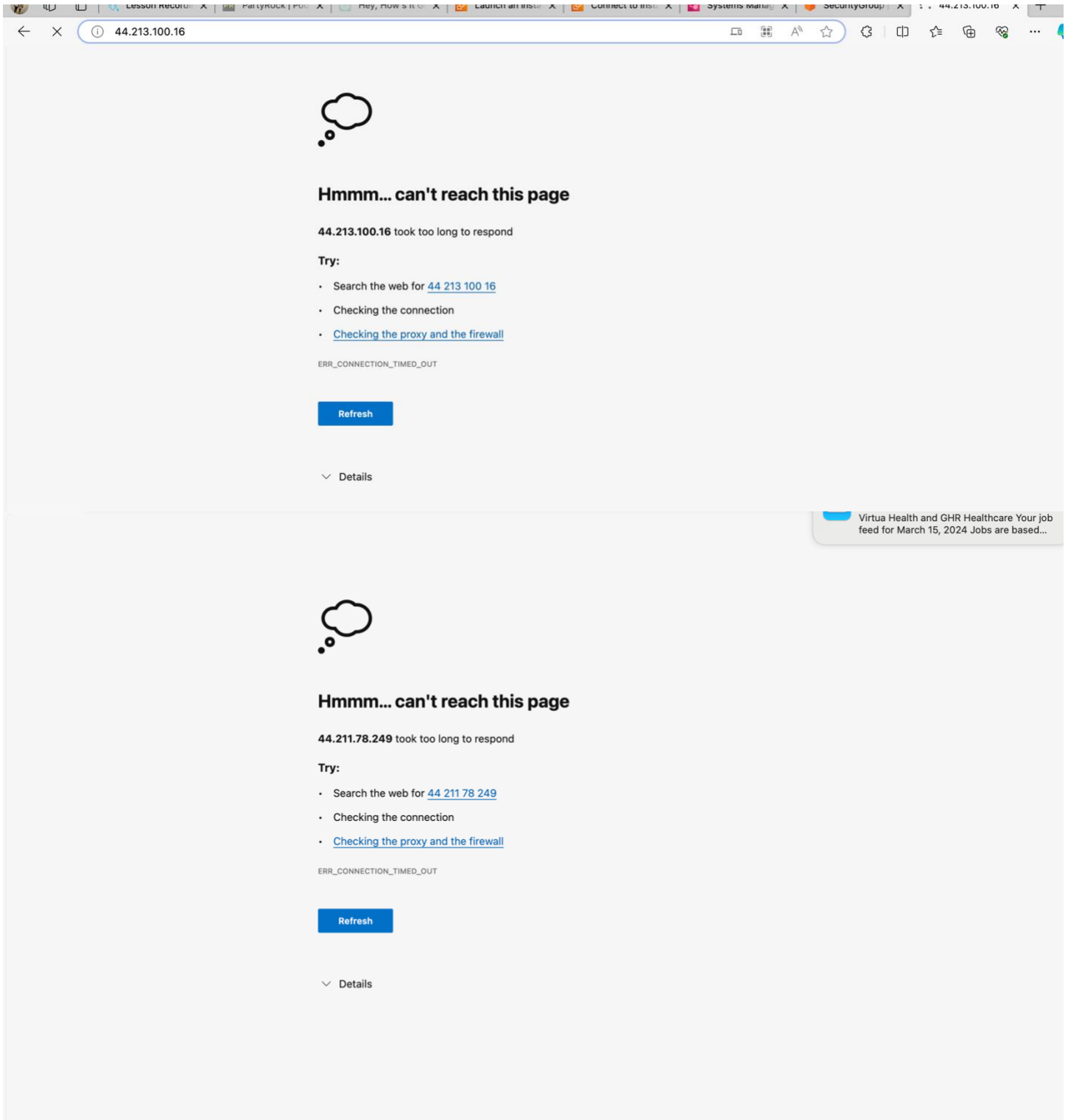


1: Creating ALB and Webserver Security Group → “alb_sg” and “web_sg” alb_sg should allow 0.0.0.0/0 on port 80



2: Create your Public webserver Image —> tag: image_server_1 and tag: image_server_2- testing the IP



3: Create Target Group with targets (Webservers) —> name: “jan2024class-tg”

please observe the status (Health status details)

The screenshot shows the AWS Management Console interface for a Target Group. The left sidebar contains navigation links for various AWS services. The main content area displays the configuration for the Target Group 'jan2024class-tg'. Key details include:

- Instance:** IP address type is IPv4.
- HTTP: 80:** Load balancer is 'None associated'.
- HTTP1:** vpc-0b5f16ff3b6ae285e.
- Targets:** 2 Total targets. Health status is 'Healthy' (0 Unhealthy, 0 Anomalous).
- Distribution of targets by Availability Zone (AZ):** Select values in this table to see corresponding filters applied to the Registered targets table below.
- Registered targets (2):** Anomaly mitigation: Not applicable. Targets are listed in a table below.

Instance ID	Name	Port	Zone	Health status	Health status details
i-0f83e4d812efe03e7	image-server-1	80	us-east-1a	Unused	Target group is not co...
i-0d5df8e2240b82ebf	image-server-2	80	us-east-1b	Unused	Target group is not co...

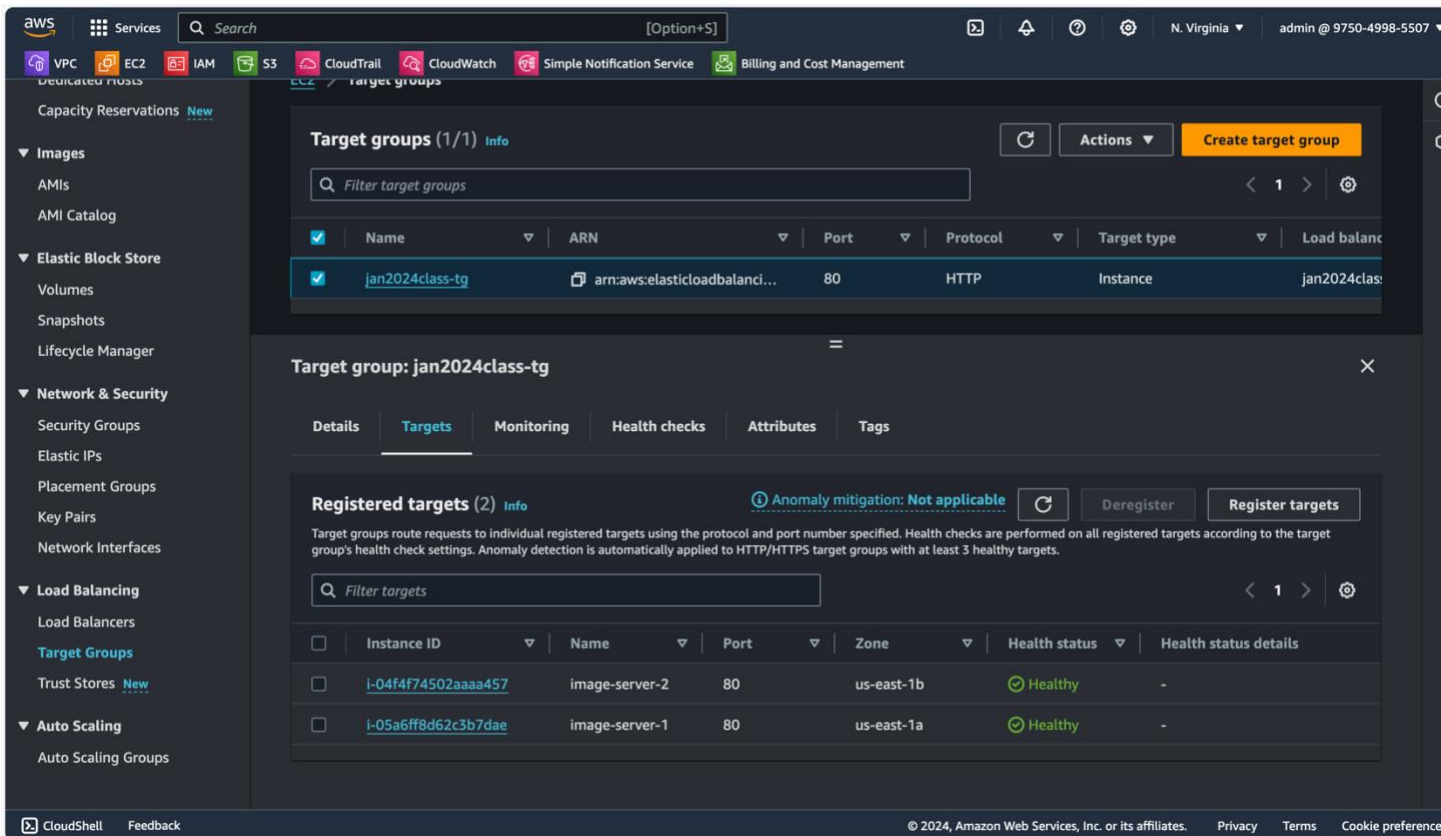
4: Create an Application Load Balancer (ALB) —> name: “jan2024class-alb”jan2024class-alb > click on Listener and take a screenshot

The screenshot shows the AWS Management Console interface for an Application Load Balancer (ALB) named 'jan2024class-alb'. The left sidebar contains navigation links for various AWS services. The main content area displays the configuration for the ALB. Key details include:

- Load balancer ARN:** arn:aws:elasticloadbalancing:us-east-1:975049985507:loadbalancer/app/jan2024class-alb/1104f52061eea5d4
- DNS name:** jan2024class-alb-1254242437.us-east-1.elb.amazonaws.com (A Record)
- Listeners and rules:** Network mapping is selected.
- Network mapping:** Targets in the listed zones and subnets are available for traffic from the load balancer using the IP addresses shown.
- VPC:** vpc-0b5f16ff3b6ae285e. IP address type is IPv4.
- Mappings:** Including two or more Availability Zones, and corresponding subnets, increases the fault tolerance of your applications.

Zone	Subnet	IPV4 address	Private IPV4 address
us-east-1a (use1-az1)	subnet-06d0a11a89d4af3da	Assigned by AWS	Assigned from CIDR 10.0.1.0/24
us-east-1b (use1-az2)	subnet-0cb57e3c3feef20c8	Assigned by AWS	Assigned from CIDR 10.0.2.0/24

5: Observe the target group status again in the console (take a screenshot when it shows healthy)



6: test your website in a browser using the ALB dns name and refresh multiple time (take screenshots of both Blue and Red)

Welcome to the Image Server 1 (Blue)

Welcome to the Image Server 2 (Red)

7: stop webserver 1 and test again to see which server is now responding (take a screenshot)

The screenshot shows the AWS Management Console interface. On the left is a navigation sidebar with categories like Instances, Images, Elastic Block Store, and Network & Security. The main content area is titled 'EC2 > Target groups'. It displays a table of target groups, with 'jan2024class-tg' selected. Below the table, a modal window titled 'Target group: jan2024class-tg' provides details. The details include the ARN, target type (Instance), protocol (HTTP), port (80), and VPC. A summary section shows 2 total targets, with 1 healthy and 0 unhealthy. At the bottom, there's a section for 'Distribution of targets by Availability Zone (AZ)'.

Name	ARN	Port	Protocol	Target type	Load balance
jan2024class-tg	arn:aws:elasticloadbalancing...	80	HTTP	Instance	jan2024clas

Target group: jan2024class-tg

Details

arn:aws:elasticloadbalancing:us-east-1:975049985507:targetgroup/jan2024class-tg/3634b11840d3d922

Target type	Protocol : Port	Protocol version	VPC
Instance	HTTP: 80	HTTP1	vpc-0b5f16ff3b6ae285e

IP address type	Load balancer
IPv4	jan2024class-alb

Total targets	Healthy	Unhealthy	Unused	Initial	Draining
2	1	0	1	0	0

0 Anomalous

Distribution of targets by Availability Zone (AZ)

Select values in this table to see corresponding filters applied to the Registered targets table below.

8: clean up your environment by deleting in the reverse order that you created all resource (take screenshots of both Blue and Red)

The screenshot shows a web browser window with a light gray background. At the top, there's a thought bubble icon. Below it, the text 'Hmmm... can't reach this page' is displayed. Underneath, a message states '44.211.78.249 took too long to respond'. A 'Try:' section follows, with three bullet points: 'Search the web for 44 211 78 249', 'Checking the connection', and 'Checking the proxy and the firewall'. Below this, the error code 'ERR_CONNECTION_TIMED_OUT' is shown. A blue 'Refresh' button is centered, and a 'Details' link is at the bottom.

Hmmm... can't reach this page

44.211.78.249 took too long to respond

Try:

- Search the web for [44 211 78 249](#)
- Checking the connection
- [Checking the proxy and the firewall](#)

ERR_CONNECTION_TIMED_OUT

[Refresh](#)

[Details](#)

9: clean up your environment by deleting in the reverse order that you created all resource

C

The screenshot displays the AWS Management Console interface. At the top, a navigation bar includes the AWS logo, a search bar, and service icons for VPC, EC2, IAM, S3, CloudTrail, CloudWatch, Simple Notification Service, and Billing and Cost Management. The left-hand navigation pane is expanded to show the 'EC2' section, with 'Target Groups' highlighted under the 'Load Balancing' category. The main content area is titled 'EC2 > Target groups'. It features a 'Filter target groups' search bar and a table with columns: Name, ARN, Port, Protocol, Target type, and Load balance. Below the table, a message states 'No target groups' and 'You don't have any target groups in us-east-1', with a 'Create target group' button. A green notification banner at the top of the console area reads 'Successfully deleted target group: jan2024class-tg.'. At the bottom, a modal window shows '0 target groups selected' and prompts the user to 'Select a target group above.'.

aws

Services

Search

[Option+S]

VPC

EC2

IAM

S3

CloudTrail

CloudWatch

Simple Notification Service

Billing and Cost Management

Capacity Reservations

New

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups

Trust Stores

New

Auto Scaling

Auto Scaling Groups

Successfully deleted load balancer: arn:aws:elasticloadbalancing:us-east-1:975049985507:loadbalancer/app/jan2024class-alb/1104f52061eea5d4.

EC2 > Load balancers

Load balancers

Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.

Filter load balancers

Name

DNS name

State

VPC ID

Availability Zones

Type

No load balancers

You don't have any load balancers in us-east-1

Create load balancer

0 load balancers selected

Select a load balancer above.

CloudShell

Feedback

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Services

Search

[Option+S]

VPC

EC2

IAM

S3

CloudTrail

CloudWatch

Simple Notification Service

Billing and Cost Management

EC2 Dashboard

EC2 Global View

Events

Console-to-Code

Preview

Instances

Instances

Instance Types

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Reserved Instances

Dedicated Hosts

Capacity Reservations

New

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Successfully terminated i-0f83e4d812efe03e7,i-0d5df8e2240b82ebf

Instances (2/2)

Info

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

Any state

Instance state (client) != terminated

Clear filters

Name

Instance ID

Instance state

Instanc...

Status check

Alarm status

image-server-2

i-0d5df8e2240b82ebf

Shutting-down

t2.micro

2/2 checks passed

View alarms

Instances: i-0f83e4d812efe03e7 (image-server-1), i-0d5df8e2240b82ebf (image-server-2)

Monitoring

Alarm recommendations

3h 1d 1w 1h UTC timezone

Add to dashboard

CPU utilization (%)

Percent

6.34

3.17

0

00:40 01:40

Network in (bytes)

Bytes

43.2k

21.6k

0

00:40 01:40

Network out (bytes)

Bytes

29.1k

14.6k

0

00:40 01:40

Network packet...

Count

190

95.2

0

00:40 01:40

Network packets out (c...

Count

165

0

00:40 01:40

Disk reads (bytes)

Bytes

1

0

00:40 01:40

Disk read operations (o...

Count

1

0

00:40 01:40

Disk writes (bytes)

Bytes

1

0

00:40 01:40

CloudShell

Feedback

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